STATE OF NORTH CAROLINA

OFFICE OF STATE PERSONNEL

POSITION DESCRIPTION FORM (PD-102R-92)

Approved Classification: _____

Effective Date: _____

Analyst: _____

(This Space for Personnel Dept. Use Only)

1. Present Classification Title of Position Transportation Engineer Supervisor II	7. Pres. 15 Digit Position No. Prop. 15 Digit Pos. No.
2. Usual Working Title of Position PEF Coordinator	8. Department, University, Commission, or Agency Transportation
3. Requested Classification of Position	9. Institution & Division Highways
4. Name of Immediate Supervisor	10. Section and Unit Highway Design \ Location & Surveys
5. Supervisor's Position Title & Position Number Transportation Engineering Manager I	11. Street Address, City and County 1020 Birch Ridge Rd., Raleigh, NC
6. Name of Employee	12. Location of Workplace, Bldg. And Room No. Century Center, Bldg. B

I. A. Primary Purpose of Organizational Unit:

The primary purpose of Location & Surveys is to serve as support services in providing engineering analysis and mapping for the design of transportation facilities and the acquisition of property for the construction of transportation facilities.

B. Primary Purpose of Position:

The primary purpose of this position is to provide managerial support for Location & Surveys in the supervision and administration of route location survey/engineering work performed by private engineering firms (PEF) through turn-key and limited service contracts. As a part of the L&S upper management team, the PEF Coordinator helps evaluate the needs and policies of the Unit as they apply to PEFs. This person serves as the major liaison to PEF's through Unit in-house limited service contracts and through Design Service contracts, informing and implementing policies and procedures, and evaluating the impacts of those policies and procedures on field operations. This person administers several contracts of various types, including contracts for Conventional Surveys, Global Positioning Systems (GPS) work, Subsurface Utility Engineering and location (SUE), and Vanguard 505 Pavement Survey Systems. These various contracts may total 6 million dollars or more and are for a maximum of one year. Several of these contracts (SUE, Vanguard) are for special services not supplied by Unit or other NCDOT in-house staff, and as such require specific knowledge of the applicable technology. This person also serves as a representative of L&S in meetings with Division Engineers and others from Divisions, other Units, and other Branches, other agencies, or professional or civic organizations which may request L&S participation.

C. Work Schedule:

8:00 AM to 5:00 PM, or some variation thereof, Monday through Friday, for a total of 40 hours per work week. Extended work days may be required due to travel and work conditions. Flexible hours will be common due to travel required and attendance at evening meetings.

D. Change in Responsibilities or Organizational Relationship:

The increased use of PEF's in the Unit and NCDOT and the increased liability involved in contract negotiations, review, and administration responsibilities have created the need for a higher level of organizational responsibilities of this position.

II. A. DESCRIPTION OF RESPONSIBILITIES AND DUTIES: Method Used (Check One) Order of importance X__
Sequential order_____

Place an asterisk (*) next to each essential function. (See instructions for complete explanation.) Please note percentage of time for each function.

No. %

1 35 **Contract Administration** - This position supervises the administration of several Unit limited service contracts for survey services including conventional surveys, litigation surveys, GPS, SUE, and Vanguard 505. This position would be responsible for any additional contracts as deemed necessary for any other survey services not offered by Unit or other NCDOT personnel. Contract administration includes involvement with supervisor and other Unit personnel in determination of needs for services, including types of contracts, numbers of firms, and amounts of contracts; includes writing and ensuring timely advertisement of requests for Letters of Interest from firms, in order to get sufficient PEFs statewide to meet Unit needs; includes serving as member of Design Branch Selection Committee for L&S and other contracts; includes writing of technical contracts for route location and special survey services; includes initial negotiations with selected firms in establishment of contract scopes, definition of Unit procedures, supervision of engineers/technicians in certification testing of PEFs for NCDOT work: includes tracking of money available on PEF contracts: includes Unit responsibility as assigned by Unit Head for ensuring that all work contracted has been supplied to the satisfaction of the Unit: responsibility for invoicing and payment of fees to PEFs. Serves as Unit representative in contract disputes. Supervises engineers/technicians in review of procedures performed by PEF to ensure that proper technical procedures are used by PEF in performance of contracted services; supervises engineers/technicians to ensure that proper contract and fiscal procedures are used by Unit and PEF. This position has the authority as defined by the Unit Head to cancel contracts or determine if PEF/ Unit has responsibility for renumeration/additional payments because of failure to follow proper procedures.

2 35 **Project Coordination** - Coordinates route location surveys to be done through the Design Services Unit or through Unit limited service contracts. This involves working with other Units in identifying projects to be done as turn-key (Surveys, Photogrammetric Mapping, Design) and coordinating with in-house staff for NCDOT activities necessary for turn-key projects. This includes coordination with in-house field offices in use of PEF GPS work, SUE work, and pavement surveys using Vanguard. This includes supervision of engineering/technical staff in review of route location work by PEF in performance of contracted services for NCDOT, either through Design Services or Unit limited service contracts, said contracts often involving technology available only through the use of consultant forces. This includes involvement in initial project scopes with selected firms and survey sub-contractors, to establish project scope and responsibilities of PEF on the project. This includes responsibility to ensure that PEF survey sub-contractor has sufficient knowledge and abilities to perform route location surveys as defined by Unit and NCDOT. This position has Unit authority to accept of reject work performed by others according to their use of proper procedures in field and mapping phases of route location work.

3 20 **Unit Administration** - Assists, with peers in the Unit (other Area Locating Engineers), in the evaluation and determination of policies and procedures to be used by the Unit personnel in administrative tasks and the operation of the Unit: assists with peers in evaluation and determination of technical policies and procedures to be used by all route location survey crews performing those tasks as required in the collection of survey data and preparation of plan sheets for TIP projects, condemnation maps, or others as requested and performed by Location & Surveys. Serves as Central Office representative to PEF's in implementation of policies, procedures, etc. and in administrative duties for the Unit. Serves as representative of Unit in meetings with PEF's in any matters related to Unit concerns.

4 05 **Personnel** - Administrative and personnel concerns such as Performance Reviews, coaching and training, discipline, staffing of those groups under the direct supervision of this position.

5 05 **Other** - Other duties as required by Unit Management

II. B. OTHER POSITION CHARACTERISTICS: (cont.)

1. Accuracy Required in Work:

Scheduling must be accurate to reflect manpower needs and coordination with other Units in tasks performed by several groups. A high degree of coordination among different Units and the many different groups within Location & Surveys is required to ensure that all pertinent data is collected, accurately, by way of the best procedures. This may involve using new equipment or new methods to collect data. An accurate knowledge of the capabilities of survey crews and survey technology is required, in order to best provide options for performing requested work. Use of new /unfamiliar technology without sufficient understanding could result in insufficient or erroneous data collection.

2. Consequence of Error:

Improper planning or scheduling could result in inadequate manpower needs to meet the annual demands on the Unit. This could result in project delays or schedule changes which might affect eventual "Let" dates, resulting in not meeting proposed schedules by the NC Board of Transportation or loss to the Department of federal funds for project completion. Incomplete data caused by incorrect procedures or inability to collect data may cause errors in design. Inability to collect data, inaccurate data, or incomplete data may be caused by lack of familiarity with the needs of requesting agency or the technical capabilities of survey crews or equipment.

3. Instructions Provided to Employee:

Position requirements include sufficient experience and knowledge to enable the employee to perform the duties of this position. Goals are defined and procedural guidelines are established. Deadlines are established when applicable. It is usually up to the employee to ensure completion of tasks in a timely and accurate manner, and to determine the best method to resolve issues, provide and present data, or prepare for the assigned task. Instructions may be either oral or written and may be general or specific in nature, according to the scope of work.

4. Guides, Regulations, Policies and References Used by Employee:

NCDOT Highway Design Manual; AASHTO Geometric Design Policy; CADD and other computer references and manuals; General Statutes of North Carolina as related to Highways; NCDOT Personnel Manual; NCDOT Field Fiscal Procedures Manual; NCDOT Workplace Safety Manual; NCDOT and FHWA Manuals on Uniform Traffic Control Devices (MUTCD); Legal Principles of Boundary Surveying and other legal texts on surveying; various engineering and surveying texts including cadastral, geodesy, and route location; general practices, principles, procedures, and ethics of professional engineering and surveying as described by the NC State Board of Registration for Professional Engineers and Registered Land Surveyors; dictionary.

5. Supervision Received by Employee:

Once initial training has been completed, this is an independent position, supervised by a Transportation Engineer Manager I. Very little daily instruction or supervision is provided on 90% of the duties of the position. Problem areas are either resolved at this level or passed up to the supervisor for involvement or resolution. Tasks and duties may be reviewed during and after completion, but due to the independent operation of this position, specific activities that lead to task accomplishment are not reviewed. Personnel matters are reviewed with immediate supervisor as needed.

6. Variety and Purpose of Personal Contacts:

This position requires personal contact with Location & Surveys Locating Engineers and other Area Locating Engineers for the purpose of determining Unit needs and coordination of work between groups and/or areas. It requires contact with engineers and technicians in other Units, Branches, and Divisions, including Branch Managers and Division Engineers, in coordinating and scheduling work. It includes contact with engineers, technicians, and others outside of the Department in providing or requesting additional project data that may not be obtained through usual route location survey needs. It requires contact with Right Of Way agents and attorneys in the evaluation of needs for exhibits for condemnation hearings or other legal matters. It involves contact with NCDOT Fiscal Section staff to ensure proper fiscal procedures are followed by Unit and PEF's. Contact with general public, non-NCDOT professionals, other state DOT's is common.

7. Physical Effort:

Physical effort involves mostly office work. There may be some outside work due to special assignments. Outside work may involve any type of weather or geographic conditions, at any time of day. Some physical labor such as traversing rough terrain, chopping brush, or carrying heavy or cumbersome equipment may be required at times. Travel to different areas of the state may be required for some tasks.

8. Work Environment and Conditions:

90% of work is done inside, in controlled office environment, in good conditions. 10% may be outside, in any type of weather including heat, cold, or rain.

9. Machines, Tools, Instruments, Equipment and Materials Used:

Computers; CADD workstations; hand-held calculators; triangles, scales, and other hand-drafting or measuring equipment; manuals; large photographs and plan sheets; telephone. Occasional use of survey equipment such as plumb bobs, electronic theodolites, GPS receivers, tripods, bush axes, and others may be required. Operation of motor vehicles may be required during travel or in performance of special duties.

10. Visual Attention, Mental Concentration and Manipulative Skills:

Computer/calculator operation, writing memos, and compiling reports require keypunch and writing abilities. Mental concentration is required to plan, coordinate, and maintain schedules, review data, solve engineering problems, and work with others in problem-solving. Mental concentration is required for 85%-90% of the duties. Visual attention is required in checking data and project evaluation.

11. Safety for Others:

This position has to be aware of the safety for field personnel in gathering data and completing requested assignments. This position has to ensure that any requested information can be obtained safely, without endangering the lives of NCDOT personnel or others doing the work, as well as members of the public who may be involved in the operations, either through vehicular travel or close proximity to the project activity.

12. Dynamics of Work:

Project schedules are constantly changing, requiring constant review of preliminary and actual yearly schedules. Engineering and design standards are often revised. Methods, procedures, and equipment for collecting route location survey data, including survey equipment and computer hardware and software, are always being revised, upgraded, or improved. These changes require a continuous upgrading and maintenance of knowledge of the engineering and surveying professions. Contracts are awarded based upon an amount of money or one year, whichever comes first. Constant tracking of contract awards is necessary.

III. KNOWLEDGE, SKILLS & ABILITIES AND TRAINING & EXPERIENCE REQUIREMENTS:

A. Knowledge, Skills and Abilities:

Working knowledge of the principles and practices of Civil Engineering and Route Location Surveying. Knowledge of the different phases of highway design and different duties of the different Units, Branches, and Divisions of NCDOT. Knowledge of the fiscal procedures and limitations based upon NCDOT rules and regulations and Board of Registration requirements. Skill in the operation of computer hardware and software, including familiarity with the capabilities and limitations of CADD equipment. Ability to understand and explain preliminary and design mapping, construction and Right Of Way plans, and legal documents. Communicate effectively with others, in both oral and written media.

B. 1. Required Minimum Training:

Graduation from a four year college or university with a Bachelor of Science in Civil Engineering, and four years of progressive Transportation Engineering experience; or graduation with a Bachelor of Science in Engineering Technology with five years of progressive transportation experience: or an equivalent combination of education and experience.

2. Additional Training/Experience:

Additional training as needed will be supplied by supervisor and Location & Surveys Unit or NCDOT Training Personnel.

3. Equivalent Training and Experience:

In lieu of a BSCE, two years of directly related Transportation Engineering experience at the TTS I level or above is equivalent to one year of education. In lieu of a civil engineering degree (BS or AS), successful completion of the ITRE Highway Engineering Concepts Course will be required.

C. License or Certification Required by Statute or Regulation:

NC Driver's License is required.
Professional Engineer required
Registered Land Surveyor preferred.

IV. CERTIFICATION: Signatures indicate agreement with all information provided, including designation of essential functions.

Supervisor's Certification: I certify that (a) I am the Immediate Supervisor of this position, that (b) I have provided a complete and accurate description of responsibilities and duties and (c) I have verified (and reconciled as needed) its accuracy and completeness with the employee.

Signature _____ Title: _____ Date: _____

Employee's Certification: I certify that I have reviewed this position description and that it is a complete and accurate description of my responsibilities and duties.

Signature _____ Title: _____ Date: _____

Section or Division Manager's Certification: I certify that this position description, completed by the above named immediate supervisor, is complete and accurate.

Signature _____ Title: _____ Date: _____

Department Head or Authorized Representative's Certification: I certify that this is an authorized, official position description of the subject position.

Signature _____ Title: _____ Date: _____